**SCH3U - F. Gases and Atmospheric Chemistry**

Culminating activity

Your culminating task is project that the whole class will be involved in. “Students can develop background knowledge through both direct and indirect experiences”. (Marzano 2004) This is why you are going to make video clips and combine them into a class video, which we will watch at the end of the unit. This will help prepare you for the unit. The video should be no longer than 2 hours long, which means that each group will have 3-10 minutes of time for their video clip. You will use your own cameras (or cell phones etc.) for filming, or you may ask me for further assistance in filming your work.

Groups of students in the class will work together to make a video clip for each of the Ministry of Education’s curriculum expectations on the Gases and Atmospheric Chemistry unit. The curriculum documents are provided at the end of this document.

**Jump start on assigning sections:**

 You will divide yourselves into equal groups, so that each group will cover at least one of the topics in the curriculum.

* Read the Ministry documents at the end of this package. (pages 102-103 of the Senior Science Curriculum)
* Read through the expectations. Rank your top five, with five being the highest and one the lowest.
* The expectation codes will be written on the board. Write your name and ranking number under each of your choices.
* Compare the popularity of choices with your classmates and use this to help divide the class into groups. Each expectation should be covered by a group.
* Submit your group names and the expectation your group will cover.

**Once your groups are made:**

* Follow the choice board for ideas on how to film your topic.
* As a class we will discuss if the marks allotted for each choice are fair and if any of them should be changed.

**Class days set aside for preparation and viewing:**

* Classes 10, 14, 17 – Submit rough proposal.
  + Proposals must be submitted to teacher before filming.
* Class 18 – Filming should be complete.
  + All video clips should be submitted digitally to teacher’s laptop (format should play on windows movie maker). Teacher will combine all video clips into one continuous video.
* Classes 19, 20 - Viewing films.

 Choice Board for Culminating Task: Gases and Atmospheric Chemistry

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| --- | --- | --- | --- | --- | --- |
| Visual | Auditory | Group Learner | Kinaesthetic | Expressiveness | Individual Learner |
| Create a concept map or flow chart that details the different concepts that relate to the expectation.    10 points | Talk with a partner about the similarities and differences between a mole-mole conversion and a mass-mole conversion.    10 points | In a group, take a bag of problems and answers. Staple all of the correct answers to their correct problems. Film the process of asking your group members the question and have them give their best response (explain the correct answer). Rotate so that each group member gets equal turns to ask and respond to questions.    10 points | Create a catchy visual display of vocabulary words from the stoichiometry unit from your notes. Each term should have a definition and a graphic. Look at the word bank for possible terms you can use. (Minimum of  3)  10 points | Write a 1 page story about mole world. Look at the word bank for possible terms you can use (Use chemistry words and concepts!).  10 points | Each group member finds and interactive website on the topic and presents it while being filmed.  15 points |
| Each member of the group designs a sticker or writes an acronym and films their explanation.  5 points | Create 30s-1min radio commercial s. (Minimum of 3)  10 points | Dramatize your topic and film it.  15 points | Get into a circle and play ball summary to explain your topic. Film your game.  10 points | Write a comic strip as a group.  10 points | Present a summary of scientific articles to the class on your topic. (Minimum of 3)  20 points |
| Create a poster that shows a brand new chemistry student how to do a stoichiometry problem.    5 points | In a group of up to 3, come up with a rhyme or song about balancing equations. Compose new lyrics for a song and sing it (or rap it).  10 points | | Create a game based on your topic. Create a board game, a computer game, a white-board race, etc. Provide a clear set of instructions, rules, and how to score/determine a winner.  20 points | Write a how-to paper, discussing how to solve a stoichiometry problem to a friend. Read it out loud.  15 points | Research and take notes on the history of your topic. Which chemists contributed to the development of your topic and how?  15 points |
| Create an outline of your notes from the unit.  15 points | Create a commercial about mole world, inviting tourists to stop on their next vacation. Describe local attractions and what they can expect from their visit. Tourists need to know what to do for fun, where they can eat, and where they can stay.  20 points | | Use regular day items as props to improvise explaining your topic.  15 points | Choose one picture and write a stoichiometry problem, with a balanced equation, based on it. (ex. 1 frame + 1 seat + 2  wheels + 2 handlebars 🡪 1 bike)  5 points | Write 5 problems and answer them. Have each member be filmed teaching how to answer the problems.  15 points |
| An activity of your choice. Please discuss your activity with your teacher for approval. | | | | | |

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<http://schools.hwdsb.on.ca/westdale/files/2010/10/Grades-11-and-1210.pdf>